

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the above amendments and the comments set forth fully below. Claims 1-44 were pending. Within the previous Office Action, Claims 1-44 have been rejected. By the above amendments, Claims 1, 6, 11, 20, 29 and 38 have been amended. Accordingly, Claims 1-44 are now pending.

Rejections under 35 U.S.C. § 102(b)

Within the previous Office Action, Claims 1-18, 20-27, 29-36 and 38-44 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0078161 to Cheng (hereinafter “Cheng”).

Cheng is directed to a UPnP enabling device for heterogenous networks of slave devices. Cheng teaches that the bridging device couples an IP (Internet Protocol) network to one or more non-IP networks, in order to facilitate the control of non-UPnP (Universal Plug and Play devices) by a UPnP controller on the IP network. [Cheng, Abstract] Cheng teaches that each of the non-IP networks may employ different technologies, such as USB, Bluetooth, HAVi, Home API, Home RF, X-10 and Jini. [Cheng, Abstract] Cheng further teaches that the bridging device includes enabling logic to support the UPnP addressing, discovery, and description processes for each of the devices on the non-IP network. [Cheng, Abstract] Cheng does not teach communicating with a rendezvous device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. Further, Cheng does not teach a bridging device which bridges between a UPnP device and a rendezvous device. As described above, Cheng teaches bridging between an IP network and a non-IP network.

In contrast to the teachings of Cheng, the bridging method and apparatus of the present invention, bridges a UPnP network with a rendezvous network. As taught within the present specification, “[t]he rendezvous protocol utilizes the standard IP networking protocol to enable networking and service discovery.” [Present Specification, page 6, lines 19-20] Accordingly, in contrast to the teachings of Cheng, the UPnP network and the rendezvous network are both considered IP networks. The UPnP rendezvous bridge of the present invention appropriately allows device and service discovery and converts communications directed between devices within the UPnP network and devices within the rendezvous network into an appropriate format for the receiving device, utilizing a UPnP proxy, a rendezvous proxy, a UPnP table and a rendezvous table. [Present Specification, Abstract] As described above, Cheng does not teach

communicating with a rendezvous device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. As further described above, Cheng does not teach a bridging device which bridges between a UPnP device and a rendezvous device. As described above, Cheng teaches bridging between an IP network and a non-IP network.

Claim 1 is directed to a method of bridging communications between a universal plug and play type device and a rendezvous type device. The method of Claim 1 comprises receiving a communication from the universal plug and play type device for the rendezvous type device, converting the communication into the rendezvous type protocol thereby forming a converted communication and transmitting the converted communication to the rendezvous type device, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng does not teach communicating with a rendezvous type device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. As further described above, Cheng does not teach bridging communications between a universal plug and play type device and a rendezvous type device. As described above, Cheng teaches bridging between an IP network and a non-IP network. For at least these reasons, the independent Claim 1 is allowable over the teachings of Cheng.

Claims 2-5 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Cheng. Accordingly, Claims 2-5 are all also allowable as being dependent on an allowable base claim.

The independent Claim 6 is directed to a method of bridging communications between a rendezvous type device and a universal plug and play type device. The method of Claim 6 comprises receiving a communication from the rendezvous type device for the universal plug and play type device, converting the communication into the universal plug and play type protocol thereby forming a converted communication and transmitting the converted communication to the universal plug and play type device, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng does not teach communicating with a rendezvous type device. As further described above, Cheng does not teach bridging communications between a rendezvous type device and a universal plug and play type device, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng teaches bridging between an IP network and a non-IP network. For at least these reasons, the independent Claim 6 is allowable over the teachings of Cheng.

Claims 7-10 are all dependent on the independent Claim 6. As described above, the independent Claim 6 is allowable over the teachings of Cheng. Accordingly, Claims 7-10 are all also allowable as being dependent on an allowable base claim.

The independent Claim 11 is directed to a converter configured to couple between a universal plug and play type device and a rendezvous type device to convert communications between the universal plug and play type device and the rendezvous type device into proper formats. The converter of Claim 11 comprises a universal plug and play type interface circuit configured to couple to a universal plug and play type device operating under a universal plug and play type protocol, a rendezvous type interface circuit configured to couple to a rendezvous type device operating under a rendezvous type protocol and a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit, wherein the conversion circuit converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the conversion circuit converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng does not teach communicating with a rendezvous type device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. Cheng also does not teach a rendezvous type interface circuit. As further described above, Cheng does not teach a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit. As described above, Cheng teaches bridging between an IP network and a non-IP network. For at least these reasons, the independent Claim 11 is allowable over the teachings of Cheng.

Claims 12-18 are all dependent on the independent Claim 11. As described above, the independent Claim 11 is allowable over the teachings of Cheng. Accordingly, Claims 12-18 are all also allowable as being dependent on an allowable base claim.

The independent Claim 20 is directed to a converter configured for coupling between a universal plug and play type device and a rendezvous type device to convert communications between the universal plug and play type device and the rendezvous type device into proper formats. The converter of Claim 20 comprises means for interfacing to a universal plug and play type device configured for coupling to the universal plug and play type device operating under a universal plug and play type protocol, means for interfacing to a rendezvous type device

configured for coupling to the rendezvous type device operating under a rendezvous type protocol and means for converting coupled between the means for interfacing to a universal plug and play type device and the means for interfacing to a rendezvous type device, wherein the means for converting converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the means for converting converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng does not teach communicating with a rendezvous type device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. Cheng also does not teach a means for interfacing to a rendezvous type device. As further described above, Cheng does not teach a means for converting coupled between the means for interfacing to a universal plug and play type device and the means for interfacing to a rendezvous type device. As described above, Cheng teaches bridging between an IP network and a non-IP network. For at least these reasons, the independent Claim 20 is allowable over the teachings of Cheng.

Claims 21-27 are all dependent on the independent Claim 20. As described above, the independent Claim 20 is allowable over the teachings of Cheng. Accordingly, Claims 21-27 are all also allowable as being dependent on an allowable base claim.

The independent Claim 29 is directed to a bridge device configured for coupling between a universal plug and play type device and a rendezvous type device for converting communications between the universal plug and play type device and the rendezvous type device into proper formats. The bridge device of Claim 29 comprises a universal plug and play type interface circuit configured for coupling to a universal plug and play type device operating under a universal plug and play type protocol, a rendezvous type interface circuit configured for coupling to a rendezvous type device operating under a rendezvous type protocol and a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit, wherein the conversion circuit converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the conversion circuit converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng does not teach communicating with a rendezvous type

device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. Cheng also does not teach a rendezvous type interface circuit. As further described above, Cheng does not teach a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit. As described above, Cheng teaches bridging between an IP network and a non-IP network. For at least these reasons, the independent Claim 29 is allowable over the teachings of Cheng.

Claims 30-36 are all dependent on the independent Claim 29. As described above, the independent Claim 29 is allowable over the teachings of Cheng. Accordingly, Claims 30-36 are all also allowable as being dependent on an allowable base claim.

The independent Claim 38 is directed to a network of devices, operating under a plurality of protocols. The network of devices of Claim 38 comprises one or more universal plug and play type devices operating under a universal plug and play type protocol, one or more rendezvous type devices operating under a rendezvous type protocol and a converter coupled to the universal plug and play type devices and the rendezvous type devices for converting communications between the universal plug and play type devices and the rendezvous type devices into proper formats. The converter comprises a universal plug and play type interface circuit coupled to the universal plug and play type devices, a rendezvous type interface circuit coupled to the rendezvous type devices and a conversion circuit coupled to universal plug and play type interface circuit and the rendezvous type interface circuit, wherein the conversion circuit converts communications directed from the universal plug and play type devices to the rendezvous type devices into the rendezvous type protocol, and further wherein the conversion circuit converts communications directed from the rendezvous type devices to the universal plug and play type devices into the universal plug and play type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. As described above, Cheng does not teach communicating with a rendezvous type device. Further, Cheng does not teach communicating with a rendezvous device that uses a rendezvous type protocol, wherein the rendezvous type protocol utilizes Internet Protocol. Cheng also does not teach a rendezvous type interface circuit. As further described above, Cheng does not teach a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit. As described above, Cheng teaches bridging between an IP network and a non-IP network. For at least these reasons, the independent Claim 38 is allowable over the teachings of Cheng.

Claims 39-44 are all dependent on the independent Claim 38. As described above, the independent Claim 38 is allowable over the teachings of Cheng. Accordingly, Claims 39-44 are all also allowable as being dependent on an allowable base claim.

Rejections under 35 U.S.C. § 103(a)

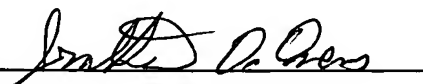
Within the previous Office Action, Claims 19, 28, 37 and 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheng in view of U.S. Patent Application Publication No. 2003/0016682 to Cho.

Claim 19 is dependent on the independent Claim 11. Claim 28 is dependent on the independent Claim 20. Claim 37 is dependent on the independent Claim 29. Claim 44 is dependent on the independent Claim 38. As described above, the independent Claims 11, 20, 29 and 38 are all allowable over the teachings of Cheng. Accordingly, Claims 19, 28, 37 and 44 are all also allowable as being dependent on an allowable base claim.

For the reasons given above, the Applicants respectfully submit that the pending claims are in condition for allowance, and allowance at an early date would be appreciated. If the Examiner has any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 so that any outstanding issues can be quickly and efficiently resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: March 7, 2008

By: 

Jonathan O. Owens
Reg. No.: 37,902
Attorneys for Applicants

CERTIFICATE OF MAILING (37 CFR § 1.8(a))
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP.

Date: 3/7/08 By: 